

[0016] FIG. 8 illustrates an exemplary touch screen having a user interface that can change topography to form a virtual keypad according to embodiments of the invention.

[0017] FIG. 9 illustrates an exemplary touch screen of an electronic device having a user interface that can change topography according to embodiments of the invention.

[0018] FIG. 10 illustrates an exemplary user interface that can change topography using electromechanical devices according to embodiments of the invention.

[0019] FIG. 11 illustrates an exemplary user interface that can change topography using electromechanical devices to raise portions of the user interface surface according to embodiments of the invention.

[0020] FIG. 12 illustrates an exemplary user interface that can change topography using electromechanical devices to lower portions of the user interface surface according to embodiments of the invention.

[0021] FIG. 13 illustrates an exemplary circuit for changing topography of a user interface using electromechanical devices according to embodiments of the invention.

[0022] FIG. 14 illustrates an exemplary electromechanical device that can be used for changing topography of a user interface according to embodiments of the invention.

[0023] FIG. 15 illustrates an exemplary user interface of a touch screen that can change topography according to embodiments of the invention.

[0024] FIG. 16 illustrates an exemplary user interface of a touch screen that can change topography to form a virtual button according to embodiments of the invention.

[0025] FIG. 17 illustrates an exemplary method for changing the topography of a user interface of a touch screen according to embodiments of the invention.

[0026] FIG. 18 illustrates an exemplary touch sensing device having a user interface that can change topography according to embodiments of the invention.

[0027] FIG. 19 illustrates an exemplary touch sensing device having a user interface that can change topography to form a scroll wheel according to embodiments of the invention.

[0028] FIG. 20 illustrates an exemplary touch sensing device having a user interface that can change topography to form a keypad according to embodiments of the invention.

[0029] FIG. 21 illustrates an exemplary touch sensing device having a user interface that can change topography to form push buttons according to embodiments of the invention.

[0030] FIG. 22 illustrates an exemplary touch sensing device having a user interface that can change topography to form a scroll wheel according to embodiments of the invention.

[0031] FIG. 23 illustrates an exemplary touch sensing device having a user interface that can change topography to form a scroll wheel and push buttons according to embodiments of the invention.

[0032] FIG. 24 illustrates an exemplary user interface that can change topography using shape changeable nodes according to embodiments of the invention.

[0033] FIG. 25 illustrates an exemplary user interface that can change topography using shape changeable nodes to raise portions of the user interface surface according to embodiments of the invention.

[0034] FIG. 26 illustrates an exemplary user interface that can change topography using shape changeable nodes to

lower portions of the user interface surface according to embodiments of the invention.

[0035] FIG. 27 illustrates an exemplary circuit for changing topography of a user interface using shape changeable nodes according to embodiments of the invention.

[0036] FIG. 28 illustrates an exemplary shape changeable node that can elongate or shrink for changing topography of a user interface according to embodiments of the invention.

[0037] FIG. 29 illustrates an exemplary shape changeable node that can rotate for changing topography of a user interface according to embodiments of the invention.

[0038] FIG. 30 illustrates an exemplary user interface that can change topography having a sensing device integrated with the user interface according to embodiments of the invention.

[0039] FIG. 31 illustrates an exemplary user interface that can change topography having a sensing device applied to a surface of the user interface according to embodiments of the invention.

[0040] FIG. 32 illustrates an exemplary user interface that can change topography having a sensing device separate from the user interface according to embodiments of the invention.

[0041] FIG. 33 illustrates an exemplary user interface that can change topography by selectively altering shape changeable nodes according to embodiments of the invention.

[0042] FIG. 34 illustrates an exemplary user interface that can change topography by selectively pressing on shape changeable nodes according to embodiments of the invention.

[0043] FIG. 35 illustrates an exemplary user interface that can change topography by selectively altering shape changeable nodes in response to pressure thereon according to embodiments of the invention.

[0044] FIG. 36 illustrates an exemplary touch pad having a user interface that can change topography and selectively activate touch regions associated with the change according to embodiments of the invention.

[0045] FIG. 37 illustrates an exemplary user interface of a touch pad that can change topography based on a sensed touch according to embodiments of the invention.

[0046] FIG. 38 illustrates an exemplary user interface of a touch pad that can change topography to form a scroll wheel based on a sensed touch according to embodiments of the invention.

[0047] FIG. 39 illustrates an exemplary method of changing the topography of a user interface of a touch pad according to embodiments of the invention.

[0048] FIG. 40 illustrates an exemplary user interface that can change topography using a shape changeable membrane according to embodiments of the invention.

[0049] FIG. 41 illustrates an exemplary user interface that can change topography using a shape changeable membrane to raise portions of the user interface surface according to embodiments of the invention.

[0050] FIG. 42 illustrates an exemplary user interface that can change topography using a shape changeable membrane to lower portions of the user interface surface according to embodiments of the invention.

[0051] FIG. 43 illustrates an exemplary circuit for changing topography of a user interface using a shape changeable membrane according to embodiments of the invention.

[0052] FIG. 44 illustrates an exemplary user interface that can change topography based on a location of a touch event according to embodiments of the invention.